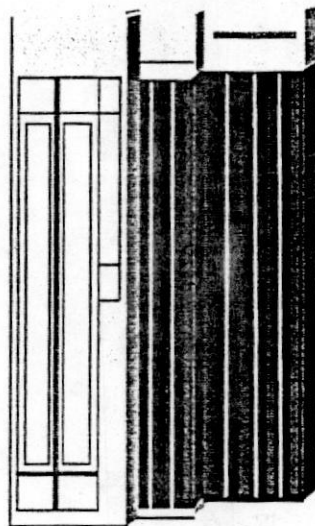


NORTEL
NORTHERN TELECOM

**Norstar-PLUS
Compact Integrated
Communication System**

Channel Introduction Package



Issue 1.0
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1.0 Introduction

This Norstar Compact ICS Channel Introduction Package is designed to assist distribution channels in Standardization and Marketing initiatives. With the information contained herein, you will be able to confidently introduce the product into the market.

The Channel Introduction Package answers the following questions on Norstar Compact-ICS:

Description - What is the product? What features does it have?

Market Positioning and Target Markets - How does this product fit into the Norstar Product line? How is the product positioned in the Marketplace

Ordering Information

How do I order the product?

What parts do I need to order?

What are the appropriate ordering codes?

Documentation - What documentation comes with Norstar Compact ICS? What additional documentation is available?

Promotion - What sales collateral material will be available for sales personnel?

Training - What type of technical training and sales training is available?

Service - What are the warranty and repair procedures?

2.0 Market Positioning

2.1 Market Need

The market is rapidly changing from basic telephony requirements to enhanced, integrated needs. At one time small businesses were viewed as single site small needs establishments, this is no longer the case. They are moving to organized communities of interest with the inherent requirement of more sophisticated needs. There is a requirement to be able to handle more information faster. The shift is to the knowledge worker who requires the correct information at the right time to be able to make the correct decision to be able to take advantage of a market opportunity.

The market is looking for solutions providers not just the box seller of a previous era. Voice messaging has become a standard method of doing business. Applications which can provide a competitive differentiation are driving changes. These are utilizing the industry standards of TAPI/TSAPI for their base.

Mobility is a true differentiation in the fact of always being able to reach the correct person who can provide the required information.

The Internet has become a force, with many companies utilizing the capabilities for their business, and this will continue to grow.

Due to the massive layoffs many people have launched their own businesses and larger companies are instituting telecommuting for parts of their workforce. The need for remote access to databases is growing.

The ISDN network is now being rapidly deployed and the information and the speed at which it can be transmitted will allow new applications to be developed for a competitive advantage.

Reliability is still one of the main drivers of the end user requirements.

This rapid change has the businesses expecting their communication system to be able to handle their needs today and to be flexible and capable to handle their growing needs in the future while protecting their investment. Businesses are looking for ways to be able to differentiate themselves to gain a competitive edge versus their competition.

2.2 Target Markets

The Norstar-PLUS ICS platform has been designed to address the existing requirements and to be able to provide the flexibility and scalability to change to meet the rapid changes in the market place. The Compact ICS completes the Norstar-PLUS core platform portfolio. It addresses the small systems sizes from 4 C.O. lines by 8 tel sets and the Modular ICS XC carries the portfolio to 264 wired tel sets or 272 ports with full roaming COMPANION wireless capability.

The prime target market of the Norstar-PLUS Compact ICS is the 4 to 20 station small business market and will replace the existing Norstar Compact 616. The Compact ICS completes the Norstar PLUS ICS product platform and provides a seamless growth from a 4 C.O. line by 8 tel set size to an 8 C.O. line by 24 tel set size. This provides a smooth transition from the Compact ICS to the Modular ICS. The Compact ICS is aimed initially at the POTS, CLASS/CMS small business markets and then will evolve to support ISDN BRI. It provides an improved value model for both the end users and the distribution channels.

The installed base of Norstar Compact 616 systems could be upgraded to take advantage of the added features, functionality, and expandability of the new Norstar-PLUS Compact ICS. All existing station sets and most peripheral equipment currently operating on Norstar core systems will work on the Compact ICS (see Peripheral Compatibility Matrix, section 4.2).

2.3 Positioning to End Users

The following positioning statements should be utilized to illustrate the benefits to the end users:

(1) Configuration flexibility/growth

The Compact ICS two universal C.O. line slots allow the flexibility to equip it with only 4 C.O. lines first and then grow to 8 C.O. lines when required. These C.O. lines can be either loop start trunks or CLASS/CMS trunks. This provides a customization capability for specific user configurations.

The Compact ICS can be purchased as a 4 C.O. line by 8 tel set configuration and can grow seamlessly to 8 C.O. line by 24 tel sets. This allows the end user to only purchase what is initially required but to allow for future expansion when required.

(2) Integrated auto attendant

This feature provides the business an effective way to handle volumes of calls in a professional manner and reduce operational costs.

- (3) *Integrated Analog terminal adapter*
The ATA is integrated into the price and does not require additional hardware and installation to connect a fax, modem or other analog devices.
- (4) *High reliability*
Norstar leads the industry in reliability and is one of the primary end user requirements.
- (5) *Future oriented platform-ISDN*
The Compact ICS will be able to support ISDN BRI in the future. The plan is to retain the common equipment and only change the C.O. line card(s) and software cartridge. In addition, as different network connections become widely used, the Compact ICS can adjust to the changing need by just replacing the C.O. line interface cartridge.
- (6) *Optional remote administration*
The compact ICS has an internal Remote Access Device which can be activated to allow remote maintenance of the system. This can be done from a single remote site and could be done by an end user with multiple Norstar systems or the distributor. This equates into more efficient and faster response time when adds, moves or changes are required.
- (7) *Competitively priced*
The Compact ICS provides a high feature to price value ratio both today and in the future.
- (8) *Common components in the ICS platform*
The Compact ICS utilizes the same C.O. loop and CLASS/CMS trunk cartridges as the Modular ICS. This provides additional investment protection if the business grows in size of feature requirements to the Modular ICS. If a business upgraded to a Modular ICS 80% of the initial investment would be protected(reused).

2.4 Positioning to Distribution Channels

The Norstar value model has been re-engineered for the Norstar Compact-ICS to help increase market share and profits for distributors. The following values show how this is accomplished:

- (1) *Competitively priced*
The Compact ICS provides a differentiated high feature to price value ratio both today and in the future. This completes the Norstar-PLUS ICS product platform.
- (2) *Configuration flexibility/growth*
The Compact ICS two universal C.O. line slots allow the flexibility to equip it with only 4 C.O. lines first and then grow to 8 C.O. lines when required. These C.O. lines can be either loop start trunks or CLASS/CMS trunks. This provides a customization capability for specific user configurations.
The Compact ICS can be purchased as a 4 C.O. line by 8 tel set configuration and can grow seamlessly to 8 C.O. line by 24 tel sets. This allows the end user to only purchase what is initially required but to allow for future expansion when required.
This provides the sales person the capability to propose the exact match to the end user needs.
- (3) *Integrated Analog terminal adapter*
This provides for reduced installation time and space.
- (4) *High reliability*
Norstar leads the industry in reliability and provides the distributors with the reduced operational costs to maintain the installed base of systems. This equates to increased profit margins which can then be reinvested in the company.
- (5) *Future oriented platform-ISDN*
The Compact ICS will be able to support digital network connectivity -ISDN BRI in the future. The plan is to retain the common equipment and only change the C.O. line card and software cartridge. In addition, as different network connections become widely used, the Compact ICS can adjust to the changing need by just replacing the C.O. line

interface cartridge. This flexibility allows for future network services revenue to be realized.

(6) *Optional remote administration*

The compact ICS has an internal Remote Access Device which can be activated to allow remote maintenance of the system. This can be done from a single remote site by the distributor and thus not requiring a site visit. This equates into more efficient and faster response time when adds, moves or changes are required. This provides increased customer satisfaction and reduced operational costs.

(7) *Common components in the ICS platform*

The Compact ICS utilizes the same C.O. loop and CLASS/CMS trunk cartridges as the Modular ICS. This provides reduced support costs in inventory, training, and provisioning.

(8) *Reduced Installation and programming*

The system was designed to reduce the installation, programming, trouble shooting and repair costs compared to the existing Compact 616. This provides reduced operational costs and increased margins.

(9) *Installed base opportunity*

The installed base of Norstar Compact 616 systems could be upgraded to take advantage of the added features, functionality, and expandability of the new Norstar-PLUS Compact ICS. All existing station sets and most peripheral equipment currently operating on Norstar core systems will work on the Compact ICS (see Peripheral Compatibility Matrix, section 4.2).

2.5 Compact ICS Portfolio Positioning

Figure 5 shows the existing Norstar product offering. As you can see in Figure 6, the Compact ICS completes the Norstar-PLUS core platform portfolio. It addresses the small system sizes from 4 C.O. lines by 8 tel sets and the Modular ICS XC carries the portfolio to 264 wired tel sets or 272 ports with full roaming COMPANION wireless capability.

The Compact ICS provides a seamless growth from 4 C.O. lines by 8 tel sets to 8 C.O. lines and 24 telsets. It replaces the existing Norstar Compact 616. It will also provide a better transition to the Modular ICS in terms of system size since the Compact ICS maximum capacity is 24 tel sets and the Modular ICS starts at 32 tel sets.

The Norstar 3X8 system will continue to be offered since there is a need for a product in a very price sensitive market. This market is price driven with little requirement to grow either in size or in capability.

Figure 5: Current Norstar core portfolio

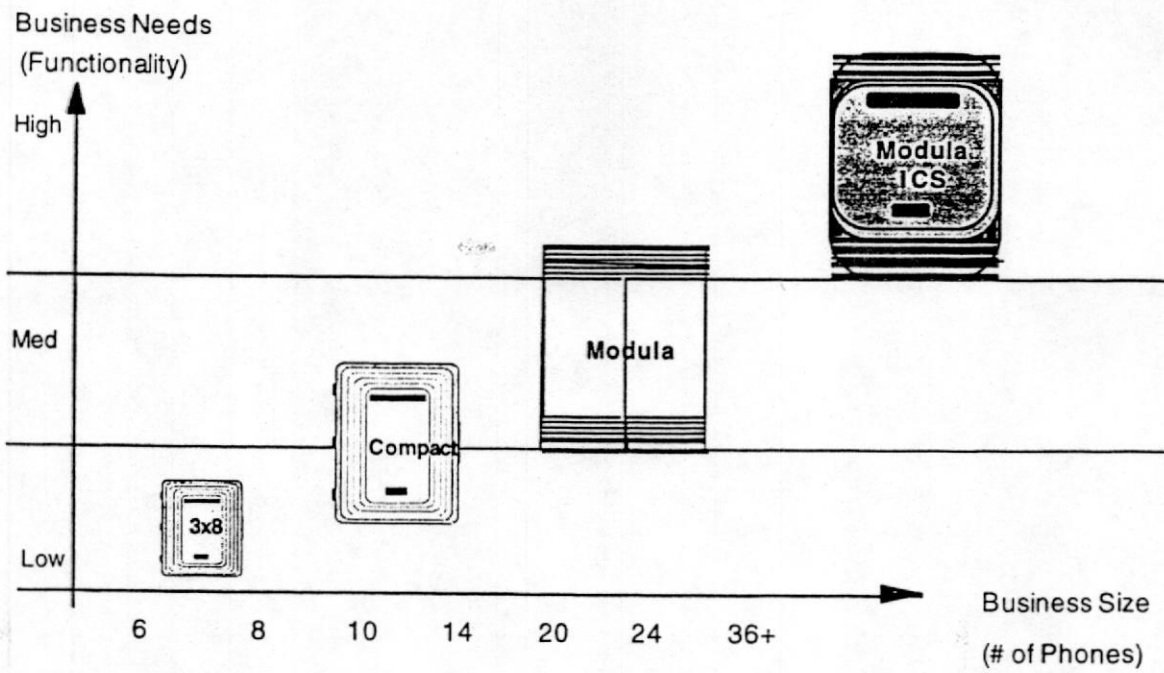


Figure 6: Norstar PLUS core portfolio

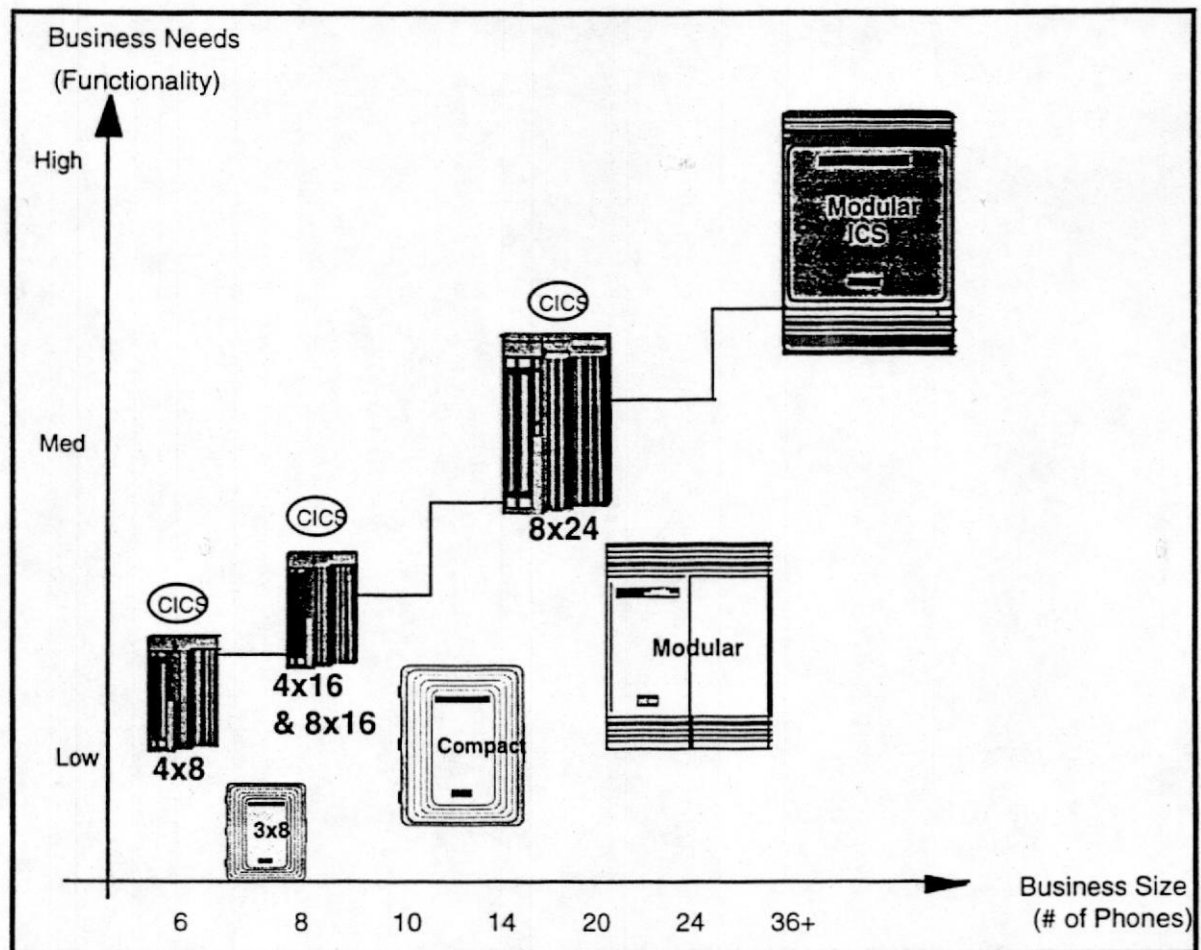
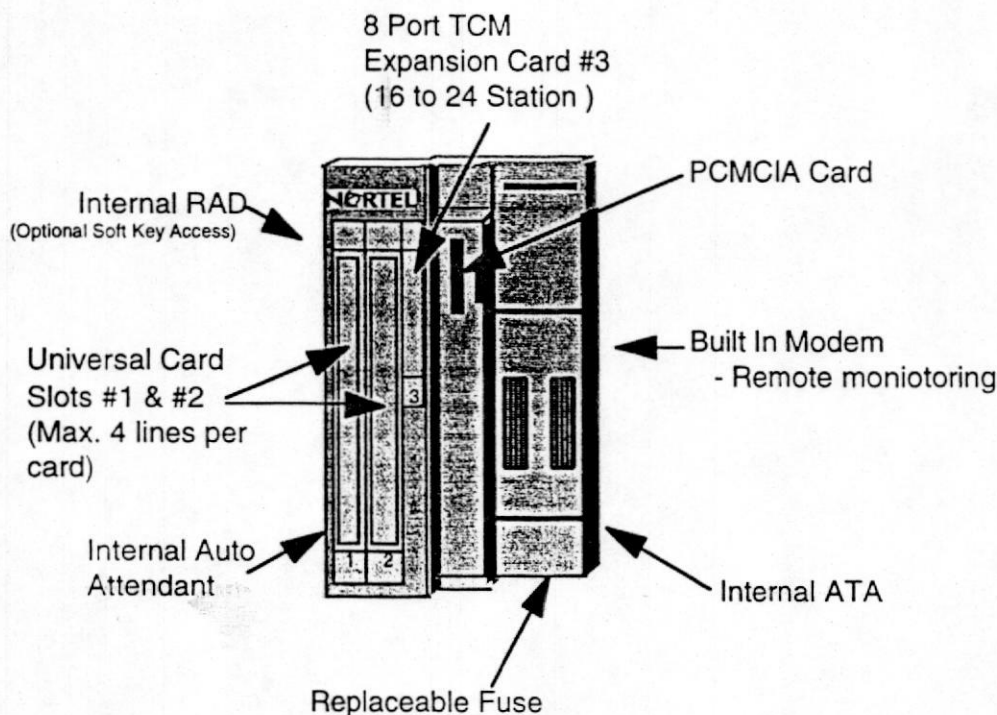


Figure 6 shows where the Compact ICS is positioned in the Norstar portfolio.

3.0 Product Description

3.1 KSU

The Compact ICS will be introduced to the CALA Region as an enhanced system with flexibility on both line and station size. The core system has the capability to interface to 8 Norstar M7000 series terminals, is expandable to 16 terminals with purchase of Soft Key Upgrade, or can be ordered initially with capability to interface to 16 terminals. Installation of the 8 port TCM expansion cartridge will expand the system for a total of 24 digital extensions. The Compact ICS supports connections to auxiliary analog interfaces such as music on hold, paging and auxiliary ringer, and is equipped with a built-in Auto Attendant, internal ATA and optional internal Remote Access Device (please refer to section 3.5.16 for detailed information). There are two Universal Slots so that trunk cartridges can be mixed/matched between analog, CLASS, and future ISDN, and a slot for the 8 port TCM cartridge. The feature cartridge is removable simplifying upgrades and is protected by the KSU cover.



3.2 8-port TCM Expansion Cartridge

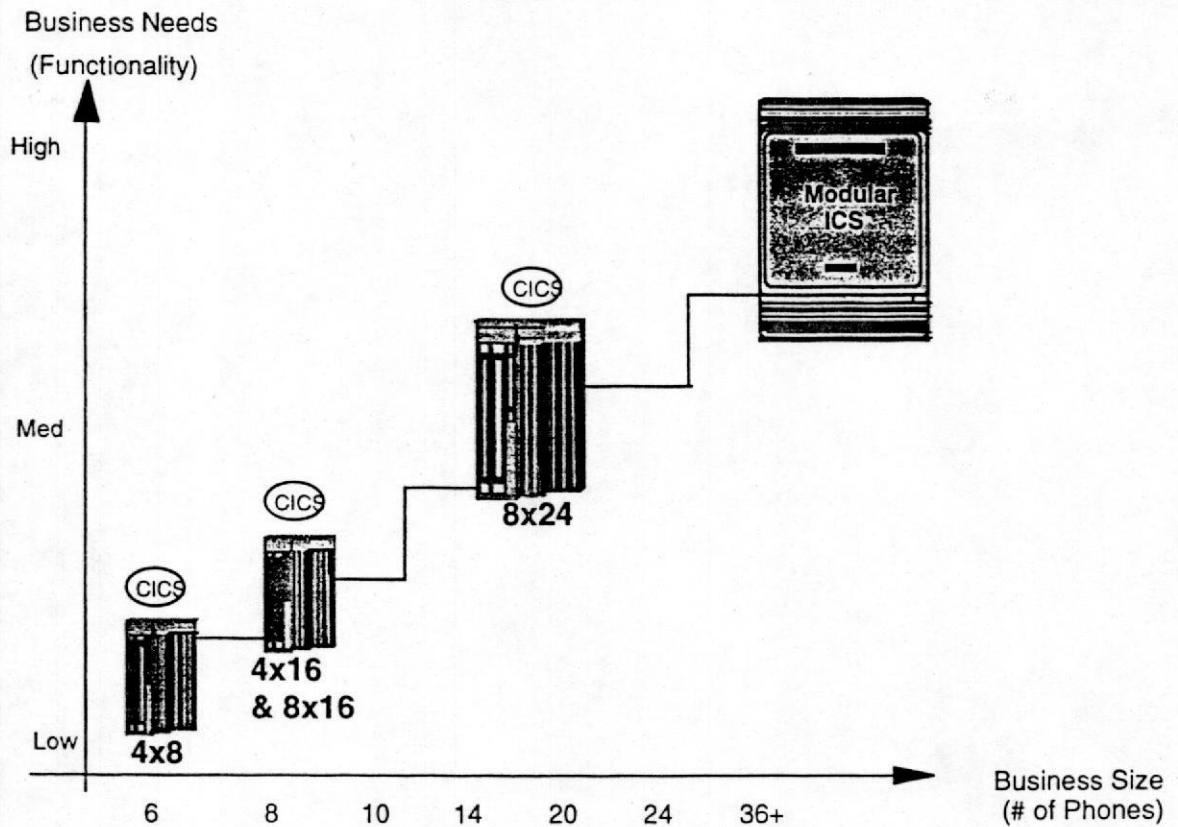
The eight port TCM expansion cartridge will be plugged into the CICS KSU expansion slot to expand the system to 24 TCM ports. This expansion capability provides flexibility for small system growth, and reduces the effects of the system size gap between Compact 616 and Modular ICS systems.

3.3 Feature Cartridge

The feature cartridge used in the Compact ICS is a memory card conforming to the PCMCIA standard. This new memory card is approximately the size of a credit card. This card stores the system programming and is used to run the system.

3.4 Supported Configurations

A small system can be constructed from a Compact ICS plus one analog trunk cartridge (ATC). Only the CLASS and Loop-Length Adjustable Disconnect Supervision (LLA-DS) Loop-Start ATCs are compatible with the Universal Slots.



the CICS has:

- 8 station ports more than Compact 6 x 16
- Two more Analog lines than Compact 6 x 16

3.5 New Feature Content

The Compact ICS has the same base features as the Compact DR5 and introduces the following new features:

3.5.1 Auto Attendant

Auto Attendant consists of two features: System Answer, and Custom Call Routing.

They can independently be turned on or off within administration or with a feature code. The entire auto-attendant feature is either turned on or off within administration. This is required in the event that an off-core voice mail system is used.

3.5.1.1 Scenarios of Usage

- A business that is receiving a lot of calls to a particular person or group of persons (should use Custom Call Routing-CCR).

- A business that needs external calls answered quickly and professionally (should use System Answer).
- A business that has no dedicated person answering and routing calls (should use Custom Call Routing-CCR).

3.5.1.2 System Answer

The system answer feature has the following behavior:

- The auto-attendant answers the call and plays a canned greeting informing the incoming caller that they will be queued at an attendant's set.
- It will also prompt the user to enter the extension number, if they know it, or hold.

It is meant to handle the overflow when the attendant set is completely busy. If system resources are not available to do the above, i.e. there are no free auto-attendant ports from the DSP (3 maximum concurrent users) or there is no DTMF receiver, the caller will continue to hear ringback. It is possible for a user to enter the extension number of a set if they know it while listening to the message; the user must start entering digits within 4 seconds.

3.5.1.3 Custom Call Routing

The custom call routing feature plays a user entered menu, and gives the caller a choice of options which include: single-digit menu access to departments, dial-0 for attendant, repetition of menu, direct extension dialing, and DISA/AUTO-DN. The custom call routing menu will be integrated with DISA, so users can activate features such as remote page and remote monitoring, or line pools to tandem through the system. If no digits are entered, as is possible with pulse sets, the system will automatically transfer the call to the attendant. There will be no replay of the menu except through user request, which will be a specifically defined digit. A maximum of 2 repeats of the menu is allowed.

A few new data items are required to support this feature:

- The single-digit department menu items are entered in a table that specifies which sets to ring for that digit. A timeout of 2.5 seconds will be used to determine that a single digit was entered.
- An attendant dial-0 set will need to be specified that is distinct from the direct-dial sets.

There will be five (5) different greetings in the product:

- User-recorded company banner that will be saved in ROM. All other greetings will be appended to it. It should be short, maximum of 5 seconds.
- Canned message, one per language, that says all attendants are busy, please hold. This is used for the system answer feature. It will be stored in ROM.
- User recorded prompt to give the custom call routing menu, stored in NVRAM; it is meant to be approximately 18 seconds long.

- User recorded message stating that the business is closed for the day; it is meant to be approximately 9 seconds long
- A canned message, one per language, that is used when the custom call routing menu is not present that says to dial an extension if known, else wait for the attendant. This will be stored in ROM.

To allow fax machines to dial through the auto-attendant, any DTMF digit will stop the recorded announcement, and be interpreted in the same manner it would have been had it been entered when the recorded announcement completed.

The auto-attendant feature will not be integrated with service modes.

3.5.2 Passive CLID

Passive CLID (Call Line IDentification) is an enhanced version found on Norstar DR5 and higher. The feature remains the same except that instead of displaying the information about an incoming call to one set, it can deliver the same information to all Norstar sets with a ringing line appearance.

3.5.3 Auto Daylight Saving Time

The clock will automatically be adjusted as per the following algorithm: the hour will fall back one hour the last Sunday of October at 2:00 a.m., and it will advance one hour the first Sunday of April at 2:00 a.m. A parameter will be available in ADMIN to specify whether or not auto daylight savings time should occur. This will make the system workable in places where the time does not change, or changes according to a different algorithm.

3.5.4 USER Preferences

Provides an alternative method for programming users adminable features. The following list can now be controlled by the end users in one session:

external autodialers	internal autodialers
features keys	personal speed dialers
language	ring type
display contrast	dialing modes
call log options	

3.5.5 Call Queuing

A feature that allows the user to answer calls in the order of priority if several calls are waiting at the set. Priority is given to external incoming calls, followed by callback and camped calls.

3.5.6 Camp-On

A feature that lets the user re-route a call to a telephone even if all the lines on that set are busy. Calls are answered by using a pre-programmed feature button or select a line if the camped call appears on the telephone set.

3.5.7 Central Answering Position (CAP)

A CAP module is connected to an M7324 telephone and provides 48 additional buttons that can be used as Autodial or Feature buttons.

3.5.8 DISA (Direct Inward System Access)

This feature allows remote users to dial directly into the Compact ICS and use Norstar features. Callers hear stuttered dial tone and are required to enter a Class of Service password to gain access to the system.

3.5.9 Destination Codes

A number that looks like a Norstar internal number, but is translated by the system to dial external telephone number. This allows transparent dialing in a public or private network.

3.5.10 Changing DN Length

The DN length can be changed from 2 to 4 digits.

3.5.11 Incoming Line Groups

A group of lines used for incoming calls. Incoming line groups provide a way of giving a telephone access to several incoming lines without taking up many line buttons. A maximum of 3 Incoming Line Groups can be programmed.

3.5.12 Loss Package

Loss package allows you to select the appropriate loss/gain and impedance settings for each line. The setting is based on the distance between the Compact ICS and the service providing Central Office.

3.5.13 Maintenance

A Compact ICS Maintenance session assists in diagnosing problems that may occasionally arise within the system. The Maintenance section of CONFIG has 6 headings:

- | | |
|-------------------|--|
| -System Version | Displays the version number of the System processor. |
| -Port/DN status | Checks the status of ports in the Compact ICS system. |
| -Module Status | Checks the status of modules in the Compact ICS system. |
| -System Test Log | Displays a list of test results and event messages |
| -System ADMIN Log | Displays a list of system initializations, Configuration sessions, invalid password attempts and password changes. |
| -Loopback Tests | Run and list any BERT (Bit Error Rate Tests) analysis. |

3.5.14 OAM (Operations and Maintenance) Restructure

NOTE: CONFIG and ADMIN have been restructured through participatory design with both distributors and end users.

The new design will simplify initial configuration and subsequent changes made to the system. The admin/config tree will be restructured, and the number of layers will be decreased. The tree has been re-organized so that more functional grouping is achieved. Data changes are not being done, i.e., the same data that is entered today for admin/config

programming remains the same. The changes are in the data entry ordering, the prompts for the data, and additional ways to traverse the data. These changes enable end-user documentation to be significantly reduced by allowing for generic description rather than specific ones.

- Create a programming tree that is more intuitive and better organized
- Shorten installation time
- Simplified documentation

3.5.15 Group Set Copy

This new feature will allow system programmers to copy data from one set to a range of DNs. This copy will have 2 options – copy from a set to all like sets, or copy from a set to all like sets (e.g. copy data from a 7310 to all 7310s within the range) within a specified range. The feature will be available through local set administration. The data that will be copied is the same as that done for set copy today. It is to be noted that it is easier to accidentally overwrite set data if, e.g., there are typos in the DN range. An error tone will be incorporated into the feature to reduce this possibility.

3.5.16 Software Keys - to enable the internal RAD and 8 station expansion (from 8 to 16 stations)

Software keys will be utilized in the Compact ICS to "turn on" built in features, such as the internal Remote Access Device and the 8 port expansion from a 4x8 to 4x16 system. By default the internal RAD will be OFF, i.e., not available; and the additional 8 stations will be unavailable for use. The process to enable the internal RAD is as follows:

- Step 1) Installer or CSR will then call into the Compact ICS KSU and retrieve the System ID number
- Step 2) Purchase *Remote Access Soft key Upgrade P0835228*. Purchase Order must contain System ID number.
- Step 3) CALA Marketing Operation Representative will enter order onto Nashville Operations.
- Step 4) Nashville Operations will call into Nortel IVR system to retrieve 24 digit key code.
- Step 5) Nashville Operation will relay information to respective Marketing Operation Representative.
- Step 6) CALA Marketing Operation will fax customer 24 digit key code, along with respective invoice.

(Total turn-around time will be maximum 48 hours.)

- Step 7) Once the key codes have been obtained, the Installer or CSR can dial back into the KSU to enter the key codes following the instructions and prompts
- Step 8) Once these Key Codes are entered the Remote Access Device will then be operational;

The Remote Access Device enables programming, maintenance and troubleshooting from the Distributors office or other off-site location. Today's business environment requires a quick response to requests for programming changes, i.e. adding Handsfree capability, moving lines, etc. and working through possible problems, i.e., troubleshooting. The Remote Access Device reduces travel time and assists you in providing prompt service at a lower cost to both you and your customer.

Enabling the RAD will also give you the capability to utilize Remote Set Software (GA scheduled for July 1996). Remote Set Software will provide Windows™ based capabilities for configuring, administering and maintaining Central Control Unit (CCU) and peripherals via simulated extension types including M7100, M7208, M7310 & M7324. It provides you with the facilities to store "profiles" of RAD connections and desired extension type information on the PC hard drive. Remote Set Software works through a series of screens and menus which allow you to navigate through the different areas of the application and easily enter information and programming. For example, you can create and change CCU configuration & administration data; program Door Station and peripherals that use the extension for programming; remotely administer the internal RAD; access to Feature **DEBUG sessions and copying of extensions and line within a system.

The process to enable the Soft Key 4x8 Key Access, 8 to 16 Station Upgrade is as follows:

- Step 1) Installer or CSR will then call into the Compact ICS KSU and retrieve the System ID number
- Step 2) Purchase *Remote Access Soft key Upgrade P0835228*. Purchase Order must contain System ID number.
- Step 3) CALA Marketing Operation Representative will enter order onto Nashville Operations.
- Step 4) Nashville Operations will call into Nortel IVR system to retrieve 24 digit key code.
- Step 5) Nashville Operation will relay information to respective Marketing Operation Representative.
- Step 6) CALA Marketing Operation will fax customer 24 digit key code, along with respective invoice.

(Total turn-around time will be maximum 48 hours.)

- Step 7) Once the key codes have been obtained, the Installer or CSR can dial back into the KSU to enter the key codes following the instructions and prompts
- Step 8) Once these Key Codes are entered the additional 8 ports (to bring the system up to 16) will be enabled.

3.5.17 Station Set Test

End users will now have the ability to determine if there is a physical problem with the Norstar telephone before it is returned to the distributor or factory for repair.

All tests will be available for all sets with the exception of the Headset Speaker test that will not be available for the M7100 as this set does not have a separate headset plug. The Headset speaker will only be available if there is a headset plugged into the phone being tested.

If the user or INR representative suspects something is wrong with a button, the speaker, the displays, or some other part of the Norstar telephone hardware, a quick test can be done to see which part of the telephone is broken.

Pressing Feature 8 0 5 on the telephone set will activate Station Set Test. *Display test* will be the first display you will see. The LCD will prompt the user through the testing procedure until finished. During the test, the display should be filled with solid, dark blocks and all the indicators next to the buttons on the telephone should be turned on. Any Busy Lamp

Field or CAP modules that are attached to the telephone should also be completely lit. You will lose any information that was showing on the BLF before the test started. Pressing any button ends the test.

4.0 Feature Matrix Comparison

4.1 Compact ICS VS. Compact DR5

Compact ICS offers several features that provide advanced call processing when compared to Compact DR5. Compact ICS provides all the features of Compact DR5 and in addition provides new features which are highlighted in bold type.

<u>Feature Comparison</u>	<u>Compact ICS</u>	<u>Compact DR5</u>
Accidental Disconnect	Y	Y
Answer Buttons	Y	Y
Auto-Answer (System)	Y	N
Auto Attendant	Y	N
Auto daylight Savings Time	Y	N
Auto dial Keys	Y	Y
-24 Digits		
-Store Facility Access		
-Store Reach Through Codes		
Automatic Line Selection	Y	Y
Automatic Set Relocation	Y	Y
Auxiliary Ringing	Y	Y
-Through Aux. Ringer Port		
-Through Paging Port		
-For Sets		
-For Lines		
-For Line in Service Modes		
Background Music	Y	Y
Busy Lamp Indication	Y	Y
-Add-on BLF for M7310		
-On M7324 DSS Key Lamps		
-On Line Pool Key Lamps		
Button Inquiry	Y	Y
Call Duration Timer	Y	Y
Call Forward	Y	Y
-Call Forward All Calls, Busy, No Answer (Variable Delays) Override		
Call Identification (Internal Calls/External)	Y	Y
Call Queuing	Y	Y
Camp On	Y	N
Central Answering Position	Y	N
-Features, Internal / External		
Auto dialers on Keys		
Central Answering Position	Y	Y
-Line Appearances		
Class of Service	Y	Y
-Dialing Abilities		
-Line Pool Access		
-Feature Access		
-COS Passwords		
	Y	N
-COS Change Via DISA	Y	N

Norstar-PLUS Compact Integrated Communication Systems**Channel Introduction Package**

Conference	Y	Y
-3 Party		
-Consultation		
-Force Release A Conference Party		
-Hold Conference		
-Split Conference		
-Transfer Via Conference		
-Unsupervised Conference (2 Party Maximum)		
Contrast Adjustment	Y	Y
Copy Set and Admin. Data	Y	Y
Custom Call Routing	Y	N
Delayed Ring Transfer to Prime	Y	Y
Destination Codes (999 maximum)	Y	N
Dial-0 Sets (Up to 1)	Y	Y
Dial External	Y	Y
Dial Intercom	Y	Y
Dial Mode for Lines - Pulse/Tone	Y	Y
Dial Pad Feedback	Y	Y
Direct Dial Sets - up to 1	Y	Y
Direct Station Select Buttons	Y	Y
DISA	Y	N
Disconnect Supervision	Y	Y
Discriminating Ringing at Set	Y	Y
Distinctive Ringing Cadence	Y	Y
Do Not Disturb	Y	Y
Do Not Disturb (On Busy)	Y	N
Enhanced Restrictions and Overrides	Y	Y
-System Speed Dial Restrictions Override		
-Dialing Filters on Set, Line and Set/Line		
External Line Access	Y	Y
Feature Access Key	Y	Y
Flexible Numbering Plan	Y	Y
-Adminable Individuals DN's		
-Adminable Line Pool Codes		
-Adminable Call Park Prefix Code		
-Adminable 'Dial-X' Code		
-Only Data Calls Dropped During Change		
-Changing DN Length	Y	N
Group Listening	Y	Y
Handsfree	Y	Y
-Answerback		
-Automatic		
-With Mute Capability		
Headset	Y	Y
Hearing Aid Compatibility	Y	Y
Hold	Y	Y
-Automatic Exclusive Hold		
-Exclusive Hold		
-Held Line Reminder		
Hot Line	Y	Y
Incoming Line Groups (3 Max.)	Y	N
Installer Password	Y	Y
Intercom Key Assignment	Y	Y
Language Choice (English/Spanish/French)	Y	N
Last Number Redial	Y	Y
-24 Digits		
-Previous Line		
-Convert to Auto / Speed Dial		

Norstar-PLUS Compact Integrated Communication Systems**Channel Introduction Package**

	Y(8)	(6)
Line Assignment (Set)	Y	Y
Line Button Relocation	Y	Y
Line Pool BLF (Outgoing)	Y	Y
Line Pool(s)	Y	Y
-Designation by Letter		
-3 Pools		
Line Pool Codes (3 Max.)	Y	Y
Line Profile	Y	Y
Line Selection	Y	Y
-Manual		
-Preselection		
Line Types	Y	Y
-Pool		
-Public		
-Private		
-V-Mail		
Link	Y	Y
Log Space (CLID)	Y (600)	N (160)
Loss Package	Y	N
Maintenance	Y	N
-System Version		
-Port / DN Status		
-Module Status		
-Diagnostics		
-System Test Logs		
-Loopback tests		
-Remote Monitoring		
Messages	Y	Y
-Send Message		
-Message Waiting/Reply		
Moving Lines	Y	Y
Remote Administration		
-Norstar Manager 3.X	Y	Y
-Remote Set	Y	Y
On Hold Treatment (Music/Silence/Tone)	Y	Y
On Hook Dialing	Y	Y
-Predial		
-Standard Dial		
-Automatic Dial		
Passive CLID (Enhanced)	Y	N
PBX / Centrex Reach Through	Y	Y
-With Feature Code Compression		
-With Recall / Link		
-Programmed Release, Pause, Run/Stop, Timed Release		
Paging	Y	Y
-Page Y or N on a Per Set Basis		
-Internal Multiple Zones (3 zone)		
-External Speaker		
-Long Tones on Paging Port		
Time out changed to 15 seconds	Y	N
Passwords	Y	Y
-Installer	Y	N
-System Coordinator	Y	N
-System Coordinator Plus	Y	N
-Basic	Y	N
-Remote Administration Password	Y	N
Pre-Selection/Call Screening	Y	Y
Prime Line	Y	Y

Norstar-PLUS Compact Integrated Communication Systems**Channel Introduction Package**

Prime Set(s)	Y	Y
-Call Forward Transfer to Prime Set		
-Callback Extension to Prime		
-Default Ringing		
-Delayed Ring Transfer		
-DND Selective Call Forward		
-DND Transfer to Prime Set		
-HLR External to Prime Set		
-Overflow Call Routing		
Priority Call	Y	Y
Privacy on Lines	Y	Y
Privacy Control	Y	Y
Pulse to Tone Conversion	Y	Y
Release	Y	Y
Remote Access Features	Y	Y
-Remote Paging		
Remote Access DN's	Y	Y
-Target Line DN's		
-DISA DN's		
-Auto Answer DN's		
Remote Set Administration	Y	N
Ringling Call	Y	Y
Ringling Line Preference	Y	Y
Routing Service (999 maximum)	Y	N
Saved Number Redial	Y	Y
-24 Digit		
-Previous Line		
Selective Line Redirection	Y	Y
Service Modes	Y	Y
-Control Phone		
-3 Settings / Day		
-Automatic Time of Day / Manual		
Set Names	Y	Y
Set Speed Dial	Y	Y
Software Keys	Y	N
System Speed Dial	Y	Y
-Restriction Override		
Capability		
-Naming Outgoing Digits		
-24 Digits		
Startup Templates	Y	Y
-Square		
-Hybrid		
-PBX		
Telephone ADMIN Lock	Y	Y
Time/Date Display	Y	Y
Transfer	Y	Y
-Unified Immediate and		
With Announcement		
-With Callback		
-Via Conference Internal/External)		
-Via Hold		
Trunk Answer From Any Station	Y	Y
Trunk Mode	Y	Y
-Supervised		
-Unsupervised		
** USER Programming	Y	N
User Programmable Feature Keys	Y	Y
Voice Call (Manual, Automatic)	Y	Y
Voice Call Deny	Y	Y
Volume Control	Y	Y

CLASS Features

Norstar-PLUS Compact Integrated Communication Systems**Channel Introduction Package**

CLASS Interface	Y	Y
-Via CII and TC		
-Multiple Data Message Format (Including Dialable DN if Available)		
CLASS Features	Y	Y
-Calling Number Display (Dialable DN if Available)		
-Calling Name Display		
-Message Waiting Indication		
-Long Distance Indicator		
-Call Information Feature		
-LOGIT Feature (Manual Logging)		
Caller Log	Y	Y
-600/160 Call Memory / System		
-Flexible Log Size Assignment		
-Flexible Log Ownership (Per Line Per Set)		
-Automatic Modes (No Calls, Unanswered, Unanswered at Set, All Calls)		
-Repeat Call Counter		
-Answered Call ICON and Long Distance Indicator		
-Time and Date		
-Optional 4 Digit Password		
-Number, Name, Linename		
-Number Editing and Callback		
-Log Management (Scrolling, Manual Deletion)		
-Autobumping Option		

4.2 Peripheral Compatibility Matrix

Some trunk cartridges, such as DID, were designed for a market specific trunk slot, and are not electrically or physically compatible with Compact ICS Universal Slots.

Universal Slots are keyed to prevent insertion of incompatible trunk cartridges. The KSU enclosure plastics have ridges in the card guides, which prevent incompatible cartridges from mating with the KSU universal slot connector. Universal Slot compatible cartridges have notches in the card edges that by-pass the ridges.

<u>TCM Peripherals</u>	<u>Compact ICS</u>	<u>Compact</u>
M7100	Y	Y
M7208	Y	Y
M7310	Y	Y
M7324	Y	Y
M7900 (manufacturer discontinued)	N	Y
Quest	Y	Y
CAP	Y	Y
PCI-D	N	Y
PCI-B	Y	Y
E-ATA and ATA	Y	Y
ATA2	Y	Y
DCI	N	Y
Norlink/Teledapter	Y	Y
Stand-alone RAD	N	Y
SMDR I-IV	Y	Y
CII	Y	Y
StarTalk-mini	N	Y
StarTalk (all versions)	N	Y
Norstar Voice Mail	Y	Y
StarTalk Flash	Y	Y
BLF	Y	Y

Doorphone	Y	Y
VMI	Y	Y
ACD	N	Y

<u>Circuit Cartridges</u>	<u>Compact ICS</u>	<u>Compact</u>
8-port TCM expansion	Y	N
Digital Trunk interface (DTI)	N	N
Service Card	N	N
CLASS/CMS	Y	N
Analog Trunk Card	Y	N
1A2	N	N
DID	N	N
E & M	N	N

5.0 Components and Ordering Information

Compact ICS e/w one LS/DS Analog Trunk Cartridge	A0652667	NT7B58AA-93
Compact ICS e/w one Caller ID Trunk Cartridge	A0652668	NT7B58AB-93
LS/DS Analog Trunk Cartridge	A0405799	NT7B75GA-93
Caller Identification Trunk Cartridge	A0393277	NT5B41GA
8 Port TCM Expansion Cartridge	A0629599	NTBB04GA-93

Documentation and Software kits

Compact ICS 4x8 software w/English Doc's	A0655988	NT7B65AE
Compact ICS 4x8 software w/French Doc's	A0655989	NT7B65BD
Compact ICS 6x16 software w/English Doc's	A0629600	NT7B65AA
Compact ICS 6x16 software w/French Doc's	A0629601	NT7B65BA
Soft Key 4x8 Access, 8 to 16 Station Upgrade	P0840065	
Internal Remote Access Soft Key Upgrade	P0835228	
System Coordinator Guide & Feature Cards-English:	A0629931	NTAB1457
Installer Guide & Programming Record-English:	A0648317	NTAB1799
System Coordinator Guide & Feature Cards-French:	A0629932	NTAB1458
Installer Guide & Programming Record-French:	A0648318	NTAB1830

Individual Documentation:

System Coordinator Guide - English	P0820425
Installer Guide - English	P0820430
Programming Record - English	P0820426
Feature Card (Qty 16) - English	P0820427
System Coordinator Guide - French	P0820432
Installer Guide - French	P0820439
Programming Record - French	P0820433
Feature Card (Qty 16) - French	P0820435
Feature Card (Qty 16) - Spanish	P0820440

6.0 Promotion

The following is the programs strategy and implementation plan for Norstar PLUS Compact ICS

Strategy:

As a platform product, the Compact ICS will automatically become part of our annual programs. In addition, it will be one of the key platforms that we will build second half programs around in terms of installed base and new system sales. These programs are currently being designed to have an applications focus as the leverage for upgrade/new sale.

- **Education/Awareness:**

- Compact ICS part of CATCOM CONFERENCE presentation (Dec. 4,5,6)
 - Compact ICS part of Caribbean Roadshow (Feb/Mar. '97)
 - Compact ICS part of DISTRIBUTORS CONFERENCE presentation (Mar.'97)
 - Compact ICS part of Latin America Roadshow presentation (Mar/Apr. '97)

6.1 Sales Collateral

At the present time we are planning to produce the following sales collateral:

- A four-color, bi-fold brochure using the Norstar-PLUS "look and feel"
- A two-color, technical specification sheet.

7.0 Technical Support--Canada and USA

CTAS (Customer Technical Assistance Support) will provide Technical Support via the CTAS telephone support numbers as listed below. All customer issues are entered into the respective CTAS CSR (Customer Service Record) Database. CSR numbers are provided to technicians who require further follow up on their service calls. CSR's that may be escalated to PR's (Problem Report) on the PRS database may require site visits by Nortel CTAS personnel and the Authorized Distributor. Where possible, CTAS may elect to reduce time and travel costs and request Remote Maintenance be exercised, installation of LOGGER devices or RADS by the Authorized Distributor.

In all cases, all CSR/PR's will be managed and closed with the originating Distributor by the CTAS group once satisfactory resolution has been achieved.

CTAS : 954- 851- 8894 (normal business hours are 8:00 AM to 5:00PM EST)
After business hours : 954 - 362- 2827

8.0 Training Materials

8.1 Sales Training and Support Tools

Objective

The objective of the Norstar Compact ICS Sales Training course is to give participants the knowledge and tools required to successfully present and sell Norstar Compact ICS. The course is designed to provide participants with training on Norstar Compact ICS, positioning and product components, customer scenarios and market opportunities.

The course goal is to ensure that students are competent in the product, its features and benefits to customers, with building profiles for potential Norstar Compact ICS customers and determining their needs, and with using appropriate sales tools to prepare and provide a sales solution for the customer.

Pre-Requisite

Participants should have a basic working and sales knowledge of both Norstar and Norstar-PLUS. Basic telephony knowledge is highly recommended.

The following pre-course materials will be available for those who wish to acquire Norstar knowledge: Norstar 101, a scripted presentation overview of the Norstar product line; and the Norstar Handbook, a quick reference guide for Norstar.

Audience and Length

Sales Representatives, Sales Associates, and Telemarketing Representatives.

Total course length including introduction, wrap up and breaks is 4 hours.

Course Content

The course will contain the following content:

- Introduce Norstar Compact ICS

 - Market Drivers

 - Norstar Compact ICS Overview

 - Positioning within the product portfolio

- Describe Norstar Compact ICS

 - Architecture

 - Hardware

 - Software

 - Models

 - Upgrades

- Describe Norstar Compact ICS Features

 - Describe the selling features of Norstar Compact ICS

 - Determine customer applications

- Explore Norstar Compact ICS Sales Solutions

 - Working with sample customer scenarios

Sales Tools

The following sales tools will be delivered as part of the Norstar Compact ICS Student Course Material:

- **Customer Application Checklist**

 - A quick reference checklist of potential customer applications.

- **Presentation**

 - A Power Point step by step overview of Norstar Compact ICS, which parallels the Student Guide.

- **Norstar Handbook**

Update of the Norstar Handbook to include Norstar Compact ICS.

8.2 Technical Training

Objective

The objective of the Compact ICS training material is to provide various participants with the knowledge and skill required to install, program, and maintain the Compact ICS platform.

Availability

One session of NPI (New Product Introduction) training to all Distributor's/Telco's at a time and location to be announced in the near future. Incremental training, is orderable from Clarissa Bachman- CALA Training Coordinator 1-954-851-8464.

Also, a technical training video is planned for distribution in Q1 '97.

8.2.1 Compact ICS Technical Training Course

Pre-requisites

Participants are expected to have completed the Norstar Modular ICS Course.

Resources Required

1. Compact ICS equipped with CICS feature cartridge
2. One wireline terminal capable of being an administration set
3. Overhead Projector
4. Slides or computer to run Powerpoint disk

The course is leader led and takes approximately 7.0 hours.

Required Equipment and Materials

Compact ICS Key Service Unit
CICS Feature Cartridge
Expansion Cartridge (8 ports)
Loop Start/Disconnect Supervision (LS/DS) Analog Trunk Cartridge
Caller Identification (CI) Trunk Cartridge
M7310 telephone (administration)
M7324 telephone (administration)
Telephone headsets (one per telephone)
Software codes (to enable remote administration and monitoring)
Leader's Guide
Participant's Guide (one per student)
Installation Guide (one per two students)
System Coordinator Guide (one per two students)
Overhead projector with screen (if using black and white overheads)
Programming Record (one per student)

8.2.2 Compact ICS Comprehensive Course**Outline**

The following is the proposed outline for the Compact ICS Comprehensive Technical Training Course. Hands-on exercises, daily reviews and student evaluation will be incorporated.

Lesson 1 Compact ICS: Introduction

- State Key Points
- Explain Importance
- Inform participants
- Introduce Compact ICS
- Outline the system capacity
- Talk about the hardware components
- Discuss the new programming structure
- Discuss programming access
- Discuss the navigational features of CICS programming
- Discuss the new features of Compact ICS
- Discuss the tests

Lesson 2 Compact ICS: Equipment Installation

- State Key Points
- Explain importance
- Inform participants
- Discuss regulatory information
- Discuss other important information
- Mount the KSU on the wall
- Install the trunk cartridges
- Install the feature cartridge
- Attach the connectors
- Put the door back
- Connect the wiring
- Plug in the phones
- Plug in the emergency telephone (optional exercise)
- Connect optional equipment (fax, modem, analog set)
- Plug in the KSU
- Swap trunk cartridges
- Upgrade the system
- Replace the fuse

Lesson 3 Compact ICS: Programming

- State Key Points
- Explain importance
- Inform participants
- Introduce the new OAM and give the major structural changes
- Exercises with the new programming structure
- Define the types of user who would use each programming password
- Discuss how to copy programming
- Describe how to copy settings at terminals and sets
- Discuss other methods of copy settings
- Discuss user preferences
- Give the steps for button programming using User Preferences
- Discuss the expanded Call ID set programming
- Discuss changes to Ringing Service

- Describe the Absorb Length Setting
- Give some examples of how AbsorbLength could be used: Example 1
- Routing exercise
- Give some examples of how Absorb Length could be used: Example 2
- Describe the new options for Page
- Explain how Daylight time is set
- give the steps for enabling Remote Monitoring using Soft Keys
- Give the requirements for allowing Remote Administration of the systems

Lesson 4 Compact ICS: Auto Attendant

- State key points
- Explain importance
- Inform participants
- Discuss the features of the Auto Attendant
- Give an outline for programming the Auto Attendant
- Give some pointers for programming the Auto Attendant
- Discuss pre-recorded and customized greetings
- Discuss programming the CCR destinations
- Describe how to turn Auto Attendant features on & off
- Exercise for Auto Attendant

Lesson 5 Compact ICS: Maintenance Tests

- State key points
- Explain importance
- Inform participants
- Describe the station set test
- Do a display test
- Do a button test
- Do a handset test
- Do a headset test
- Do a speaker test
- Do a power test
- Describe the BERT (Bit Error Rate Test)
- Exercise: Do a BERT

9.0 Warranty and Repair

The following is the Multimedia Communications Systems Division Warranty Policy and Procedure for Warranty application and the repair process for Norstar Key System components.

9.1 Warranty

The following warranty is in lieu of all other warranties and conditions whether statutory, expressed or implied, including any warranty as to merchantability or fitness for purpose, and shall constitute the sole remedy and Northern Telecom's sole liability for breach of warranty.

Northern Telecom warrants Norstar System components against mechanical or electrical failure attributable to defects in Northern Telecom's workmanship or materials for a period of 18 months from date of manufacture.

Northern Telecom will, at no charge and at its option, repair or replace a defective Norstar Key System component with a new or rebuilt unit during the warranty period. Repaired or replaced units shall be warranted for 90 days or the balance of the original warranty period whichever is longer.

9.2 Warranty Exclusions and Limitations

This warranty does not apply to damage or failures resulting from:

- negligence, abuse, misuse or accident
- repair by unauthorized persons
- failure to comply with warranty service procedures (outlined below)
 - improper installation
 - modifications to equipment or software or attachments of equipment or peripherals except as specifically authorized by Northern Telecom.
 - units for which the warranty period (18 months) has expired.

Equipment returned to Northern Telecom under these circumstances will be handled as regular, chargeable repairs.

In addition, any expenses related to the removal and/or replacement of "custom brandlining" will be charged to the sending telephone company or distributor.

Northern Telecom shall be the sole arbiter in applying and interpreting the above exclusions and limitations.

9.3 Maintenance

Maintenance will consist of replacing the ATA-2, if under warranty, when found defective and insuring that the program attributes of the ATA-2 are correct for the call-initiation session.

9.4 Repair Procedure

All units must be shipped prepaid directly from the sending telephone company or distributor to the repair location. The original or equivalent packaging should be used to avoid in-transit damage.

All units must be individually tagged indicating the telephone company/distributor name, the order number the unit was sent under, and a brief description of the suspected fault. If specifically requested, the repair location will affix this tag to the outer packaging of the unit after it is repaired.

Once received, Repair will undertake a warranty validation process on each unit using the aforementioned "Exclusions and Limitations" as a guideline and perform an up-front functional test on each unit. These processes will result in various classifications on return of the units as follows:

A. In-Warranty

Units which pass the validation process and indicate a fault during the system test will be repaired functionally as required, will be cosmetically upgraded to "like-new" appearance, and will be returned prepaid with no repair charges.

B. Out-of-Warranty

1. Those units which have a specific request for level 2 service only, but after the system test show a detectable fault, will be fully repaired and charged at the level 1 rate.

2.. Units showing obvious abuse may incur a CLASS "A" charge which will be quoted prior to performing repairs.

3. Invoices which follow the return of the repaired units will reflect the number of units total per the above categories per order.

9.5 Turn-Around Time

The original product will be repaired or a replacement product will be shipped within four weeks after receipt of defective materials at the repair depot.

9.6 D.O.A. Policy

Defective-on-Arrival products include out-of-box failures and installation failures. D.O.A must be identified within 90 days of shipment of product to customer. Product installed for more than 48 hours will be treated as a repair return and not a valid D.O.A.

9.7 D.O.A. Exclusions and Limitations

The following limitations apply to all valid D.O.A.'s:

- The product must not appear used or blemished.
- The product must be returned in the original packaging with all original components intact including Designation Cards, Booklets, Line Cords, Cabling, etc.
- A brief description of the fault must be placed in the box.

10.0 Product Specifications

Compact ICS is intended as CPE for business environments and as such the product is intended to withstand the environments encountered during use, shipping and installation. The applicable environmental requirements' specifications are:

- I.E.C. 68-2
- Bellcore TR-NTW-000063

Tables below summarize the installation environment requirements.

Operating temperature range	0C to 50C
Operating humidity range	5% to 95% (non-condensing)
Location	Clean, dry, well ventilated, and at least 4 m (13.1 ft) from equipment such as copiers, electrical motors and other equipment that can produce electromagnetic, radio frequency, and electrostatic interference.
Power source location	AC outlet located not more than 1.4 m (4.9 ft) from the KSU.
Compact ICS measures:	9-3/8"W x 17-1/4"H x 6-5/8"D 238mm W x 435 mm H x 168 mm D

10.1 Mean Time Between Failures

The MTFB numbers are as follows:

0x16 Compact ICS KSU	155 years
Feature Cartridge	570 years
8 Port Expansion Cartridge	685 years
DS Analog Trunk Cartridge	257 years

11.0 Contact List

For more information regarding the Compact ICS, please contact:

Norstar Marketing	•Mike Pabon	954/851-8458
Norstar Product Management	•Cynthia Becerra	954/851-8354
C.T.A.S. Technical Support	•Edmundo Carranza	954/851-8345 - U.S.